



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/899,991	07/09/2001	Kim Hjortgaard Nielsen	Q65346	5169

7590

03/25/2004

SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC
2100 Pennsylvania Avenue, NW
Washington, DC 20037-3213

EXAMINER

MCCHESENEY, ELIZABETH A

ART UNIT	PAPER NUMBER
----------	--------------

2644

DATE MAILED: 03/25/2004

12

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/899,991

Applicant(s)

NIELSEN ET AL.

Examiner

Elizabeth A McChesney

Art Unit

2644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 20,22-39 and 41-44 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 20,22-39 and 41-44 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

Art Unit: 2644

DETAILED ACTION

1. This action is in response to applicant's response filed on 12/24/03. Claims 20, 22-39 and 41-44 are now pending in the present application.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

3. Claims 20, 22-39 and 41-44 recite the limitation "test manager". There is insufficient antecedent basis for this limitation in the claims whereas "test manager" is not mentioned in the specification, however there is a "test controller" in the specification but not in the claims. For examination purposes the examiner examined the claims as the "test controller" reads on "test manager".

4. Claim 44 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 44 points at the "test manager" activates the probe for determination of the signal parameter however this is confusing as for example in claims 24, 26, 30 and 41, the "test manager" receives a signal from the probe and determines any defect. The examiner is confused as to whether activating and receiving are the same function.

Art Unit: 2644

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 26, 30 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fletcher et al. (US Patent No. 4,049,930) in view of Kennedy (US Patent No. 5,999,856).

Regarding claim 26, Fletcher et al. (hereinafter, "Fletcher") discloses an input transducer 10 for transforming the input signal into a first electrical signal (col. 19-20) and a hearing aid amplifier 12, that reads on a signal processor, which processes the first electrical signal to produce a second electrical signal based on the first wherein the second electrical signal is an amplified version of the first (col. 4-lines 21-24 and figure 1). Fletcher further discloses an output transducer 14 for converting the second signal into sound (col. 4-lines 24-26). Fletcher further discloses a detector 24, which performs like the probe in the claimed limitation, wherein it determines a signal parameter by comparing the reference and test signal. The probe is further connected through the signal path to the test manager 26 and reads on connecting the probe to a "first point" in the signal path (col. 4-lines 53-57). Fletcher further discloses the test manager 26, which controls the state of the hearing aid wherein it receives an input from the probe 24, and generates the warning due to a defect (col. 4-lines 67-68 and col. 5-lines 1-5).

Art Unit: 2644

Fletcher further includes a signal generator 22 for injecting a test signal at some "second point" in the signal path, wherein the second point affects the emission by the output transducer due to the determination of any defect in the signal in comparison with the input signal (col. 4-lines 46-60). Fletcher further discloses the probe 24 compares the reference and test signal wherein the test manager 26 operates the trigger, which turns on the warning system when a defect has been established and a tone is generated in the output transducer (col. 4-lines 53-67 and col. 5-lines 1-7).

Fletcher fails to specifically disclose the telecoil transducer, which picks up the output transducer, which generates a magnetic field. However, Kennedy discloses a hearing aid that includes a self calibration as well as a self test (col. 6-lines 38-41), which further includes a drive coil driven by magnetic fields and electromagnetic output transducers (col. 5-lines 62-67 and col. 6-lines 1-10). Fletcher also fails to specifically disclose an activation means for operator activation. Fletcher discloses the self test occurring at timed intervals. Kennedy discloses the calibration module may be incorporated either as hardware circuitry or as a set of instructions by a microprocessor via timing information (col. 8-lines 18-57). Fletcher further discloses the invention allows a physician to adjust the calibration module via an external stimulator, which reads on an operators activation. Therefore it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Fletcher by providing a telecoil transducer and its corresponding magnetic output transducer as well as activation via an operator for the purpose of using various types of transducers as it is well known in the art that both acoustic and telecoil transducers are used in hearing aids as well as

Art Unit: 2644

allowing the operator the advantage of either setting the activation to happen in timed intervals or upon desired triggering.

Regarding claim 30, Fletcher discloses an input transducer 10 for transforming the input signal into a first electrical signal (col. 19-20) and a hearing aid amplifier 12, that reads on a signal processor, which processes the first electrical signal to produce a second electrical signal based on the first wherein the second electrical signal is an amplified version of the first (col. 4-lines 21-24 and figure 1). Fletcher further discloses an output transducer 14 for converting the second signal into sound (col. 4-lines 24-26). Fletcher further discloses a detector 24, which performs like the probe in the claimed limitation, wherein it determines a signal parameter by comparing the reference and test signal. The probe is further connected through the signal path to the test manager 26 and reads on connecting the probe to a "first point" in the signal path (col. 4-lines 53-57). Fletcher further discloses the test manager 26, which controls the state of the hearing aid wherein it receives an input from the probe 24, and generates the warning due to a defect (col. 4-lines 67-68 and col. 5-lines 1-5). Fletcher fails to specifically disclose an activation means for operator activation. Fletcher discloses the self test occurring at timed intervals. Kennedy discloses the calibration module may be incorporated either as hardware circuitry or as a set of instructions by a microprocessor via timing information (col. 8-lines 18-57). Fletcher further discloses the invention allows a physician to adjust the calibration module via an external stimulator, which reads on an operators activation. Therefore it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Fletcher by

Art Unit: 2644

providing an activation via an operator for the purpose of allowing the operator the advantage of either setting the activation to happen in timed intervals or upon desired triggering for the operator to have control over the self test operation. Fletcher fails to disclose a feedback canceller. However, it is well known in the art that unwanted feedback occurs when the input transducer is in close proximity to the output transducer, which is the case in a small localized area such as a hearing aid. Kennedy discloses feedback self testing as well to prevent unwanted feedback. Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Fletcher by including a feedback canceller for the purpose of preventing unwanted feedback that would result in detecting defects in the desired signal.

Regarding claim 44, Fletcher in view of Kennedy discloses everything claimed as applied above (see claim 30). Fletcher further discloses the test manager 26, which controls the state of the hearing aid wherein it receives an input from the probe 24, and generates the warning due to a defect (col. 4-lines 67-68 and col. 5-lines 1-5).

Response to Arguments

7. Applicant's arguments with respect to claims 20, 22-39 and 41-44 have been considered but are moot in view of the new ground(s) of rejection. The reference to "test manager" needs further clarification, as it is not mentioned in the specification. Fletcher discloses a hearing aid malfunction detection system and Kennedy discloses a hearing aid with self testing and self calibrations. Fletcher modified with Kennedy reads on the claimed limitations and is set forth above in the rejection.

Art Unit: 2644

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth A. McChesney whose telephone number is (703) 308-4563. The examiner can normally be reached Monday – Friday, 8:00 am – 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester W. Isen can be reached on (703) 305-4386.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

EAM *EAM*
March 10, 2004

[Signature]
SPE, Art Unit 2644